

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2006/050855

International filing date (day/month/year)
20.03.2006

Priority date (day/month/year)
22.03.2005

International Patent Classification (IPC) or both national classification and IPC
INV. G11C19/18

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
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Authorized Officer

Operti, Antonio

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/B2006/050855

Box No. 1 Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	4-22
	No: Claims	1-3,24-26
Inventive step (IS)	Yes: Claims	4-22
	No: Claims	1-3,24-26
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/IB2006/050855

Re Item V.

1. The following document D1: US 6 064 713 A (LEBRUN HUGHES [FR] ET AL) is referred to in this communication; the numbering will be adhered to the rest of the procedure.
2. The present application does not meet the requirements of the Article 33(1) PCT, because the subject-matter of the claim 1 is not new in the sense of Article 33(2) PCT.
3. The document D1 discloses (the references in parentheses applying to this document): A shift register circuit comprising a plurality of stages(fig.8; claim 1), each stage comprising an input section (MN1-3, MN5-6, C1-2, C5-6) and an output section (MN4-MN7), each stage being for providing a signal to an output load (CI), wherein the input section of each stage comprises an input section drive transistor (MN2) for coupling a first clocked power line voltage (ϕ_1) to the output (D of the input section, an input section compensation capacitor (C1 for compensating for the effects of a parasitic capacitance of the input section drive transistor (MN2) and a first input section bootstrap capacitor (C2) connected between the gate of the drive transistor (MN2) and the output (D) of the input section, wherein the input section of each stage uses the output (input n-1 of the fig.8) of the input section of at least one preceding stage as a timing control input for controlling a bootstrap function (fig8, capacitor C2), and wherein the output section (MN4-MN7) of each stage comprises a circuit which receives the outputs of multiple input sections (MN4 receives input from stage n+1, whilst MN7 receives input from stage n-1) as timing signals for generating output signals for the output loads (CI)..
4. Regarding claim 2, the characterizing feature of using a transistor Tin1 for charging the bootstrap capacitor is also disclosed in D1 (fig.8, transistor MN1 is connected to previous stage output n-1).
5. Furthermore, the additional feature of the dependent claim 3, concerning the output section of each stage of the shift circuit, is also disclosed in D1 (MN4/MN7 are used to drive only the load CI).
6. If the device of claim 1 would be further defined through the technical features of claim 4 (output section of each stage of the shift register), then the claim would be considered

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new compared to the present prior art and would meet the novelty and inventive step (Article 33(1),(2),(3)PCT).

7. Also, as a special service to the applicant and in view of possible further proceedings before the EPO, the following is stated: if the method claim 24 would be formulated in a more precise way, incorporating the features of apparatus claim 1 and 4 then the method claim 24 would be considered new compared to the present prior art and would meet the novelty and inventive step.

Re Item VII

1. Any independent claim should be in the proper two-part "characterized" form recommended by Rule 63(b) PCT, having a preamble that correctly reflects the nearest prior art represented by document D1.
2. To meet the requirements of Rule 5.1(a)(ii) PCT, the document D1 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.
3. Care should be taken during the revision not to add subject-matter which extends beyond the content of the application as originally filed (Article 34(2)(b) PCT).

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International application No.
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	4-22
	No: Claims	1-3,24-26
Inventive step (IS)	Yes: Claims	4-22
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Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

2. Citations and explanations

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A shift register circuit comprising a plurality of stages(fig.8; claim 1), each stage comprising an input section (MN1-3, MN5-6, C1-2, C5-6) and an output section (MN4-MN7), each stage being for providing a signal to an output load (CI), wherein the input section of each stage comprises an input section drive transistor (MN2) for coupling a first clocked power line voltage ($\phi 1$) to the output (D of the input section, an input section compensation capacitor (C1 for compensating for the effects of a parasitic capacitance of the input section drive transistor (MN2) and a first input section bootstrap capacitor (C2) connected between the gate of the drive transistor (MN2) and the output (D) of the input section, wherein the input section of each stage uses the output (input n-1 of the fig.8) of the input section of at least one preceding stage as a timing control input for controlling a bootstrap function (fig8, capacitor C2), and wherein the output section (MN4-MN7) of each stage comprises a circuit which receives the outputs of multiple input sections (MN4 receives input from stage n+1, whilst MN7 receives input from stage n-1) as timing signals for generating output signals for the output loads (CI)..
4. Regarding claim 2, the characterizing feature of using a transistor Tin1 for charging the bootstrap capacitor is also disclosed in D1 (fig.8, transistor MN1 is connected to previous stage output n-1).
5. Furthermore, the additional feature of the dependent claim 3, concerning the output section of each stage of the shift circuit, is also disclosed in D1 (MN4/MN7 are used to drive only the load CI).
6. If the device of claim 1 would be further defined through the technical features of claim 4 (output section of each stage of the shift register), then the claim would be considered

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new compared to the present prior art and would meet the novelty and inventive step (Article 33(1),(2),(3)PCT).

7. Also, as a special service to the applicant and in view of possible further proceedings before the EPO, the following is stated: if the method claim 24 would be formulated in a more precise way, incorporating the features of apparatus claim 1 and 4 then the method claim 24 would be considered new compared to the present prior art and would meet the novelty and inventive step.

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